217/782-2113

CONSTRUCTION PERMIT
PREVENTION OF SIGNIFICANT DETERIORATION APPROVAL
NSPS SOURCE

DRAFT

PERMITTEE

Mounds Production Co., LLC
Attn: Ron Yancey, Plant Manager
700 Industrial Park Road
Mounds, Illinois 62964

Application No.: 03110024 I.D. No.: 153855AAA
Applicant's Designation: Dryers 1&2 Date Received: November 13, 2003
Subject: Modification to Dryer #1 and #2
Date Issued: ---
Location: 700 Industrial Park Road, Mounds

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of a modification of dryer #1 and #2 involving replacement of the burner system, two new wet gas scrubbers systems and new coal handling equipment as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

In conjunction with this permit, approval is given with respect to the Prevention of Significant Deterioration of Air Quality Regulations (PSD) for operation of the dryers each with a wet gas scrubber, in that the Illinois Environmental Protection Agency (Agency) finds that the application fulfills all applicable requirements of 40 CFR 52.21. This approval is issued pursuant to the Clean Air Act, as amended, 42 U.S.C. 7401 et. seq., the Federal regulations promulgated there under at 40 CFR 52.21 for Prevention of Significant Deterioration of Air Quality (PSD), and a Delegation of Authority agreement between the United States Environmental Protection Agency and the Illinois EPA for the administration of the PSD Program. This approval becomes effective in accordance with the provisions of 40 CFR 124.15 and may be appealed in accordance with the provisions of 40 CFR 124.19. This approval is also based upon and subject to the following findings and the conditions, which follow:

Findings

1. Mounds Production Co., LLC (Mounds), has requested a permit to install new burner systems in two dryers(Dryer #1 and #2) used for processing clay. This would provide the capability of firing coal, as well as fuel oil(virgin and used) and natural gas in both dryers. Currently, , dryer #1 fire natural gas only and dryer #2 fires coal and natural gas.

2. Mounds Production is located in Mounds, Pulaski County. The area is designated attainment for all pollutants.

3a. The proposed project will have potential emissions increase of 177.98 tons/year of NO_x. The project is therefore subject to PSD review as a major modification of an existing major source for NO_x emissions, emitting more than 40 tons/year.

b. The project is not subject to PSD for other pollutants, for which the potential increase in emissions is not significant(See Attachment A).

4. After reviewing all the materials submitted by Mounds, the Illinois EPA has determined that the project, as proposed, would (i) be in compliance with applicable Illinois Pollution Control Board emission standards and (ii) utilize Best Available Control Technology (BACT).

5. The air quality analysis submitted by Mounds and reviewed by the Illinois EPA shows that the proposed project will not cause violations of the ambient air quality standards for nitrogen oxide.

6. The Illinois EPA has determined that the project, as proposed, would comply with applicable Illinois Air Pollution Control Regulations and the federal rules for Prevention of Significant Deterioration of Air Quality (PSD), 40 CFR 52.21.

7. A copy of the application and the Illinois EPA's formal review of the application and a draft of this permit were placed in a location in the vicinity of the project, and the public was given notice and an opportunity to examine this material and to submit comments and to request a public hearing on this matter.

The Illinois EPA is issuing this approval subject to the following conditions and consistent with the specifications and data included in the application. Any departure from the conditions of this approval or terms expressed in the application would need to receive prior written authorization by Illinois EPA.

1.0 UNIT SPECIFIC CONDITIONS

1.1 Unit Dryers
Control Dust Collector systems, Low NO_x burners and Wet Scrubbers

1.1.1 Description

Dryer #1 and #2 are direct fired heating equipment used to remove water from clay to produce adsorbents products, such as cat litter. Dryer #1 would be modified by the installation of a new Low-NOx burner to allow use of coal and fuel oil in addition to natural gas, Dryer #2 would be modified by a new Low NOx burner to allow use of oil, in addition to coal and natural gas. Currently, Dryers #1 and #2 are both controlled by existing dust collector DC-1 and DC-2, respectively. As part of the project, wet scrubbers with a nominal design efficiency of 95

percent, would be installed on each dryer to control sulfur dioxide(SO_2).

The project would also involve and new screw feeder and a new coal-grinding mill, to handle coal for dryer #1. The grinder will exhaust directly into the dryer.

1.1.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Control Equipment
Dryer #1	Direct Dryer 42 million BTU/hr, with coal grinding mill	Low NOx Burner, existing Dust Collector (DC-1), and Wet Scrubber
Dryer #2	Direct Dryer 42 million BTU/hr	Low NOx Burner, existing Dust Collector (DC-2), and Wet Scrubber
Screw feeder	Coal handling equipment for Dryer #1	Dust Collector (DC-1)

1.1.3 Applicability Provisions and Applicable Regulations

a. The "affected dryers" for the purpose of these unit-specific conditions, are the dryers described in Conditions 1.1.1 and 1.1.2.

b. The affected dryers are subject to New Source Performance Standard (NSPS) for Standard for Calciners and Dryers in Mineral Industries, 40 CFR 60, Subparts A and UUU. This Subpart applies to each calciner and dryer at a mineral processing plant that commenced construction, reconstruction or modification after April 23, 1986. The Illinois EPA is administrating NSPS in Illinois on behalf of the United States EPA under a delegation agreement.

   i. Particulate matter emissions from vents or stacks shall not exceed 0.057 g/dscm(0.025 gr/dscf), pursuant to 40 CFR 60.732(a).

   ii. Opacity shall not exceed 10 percent, unless the emission are discharged using a wet scrubbing control device, pursuant to 40 CFR 60.732(b).

c. The affected dryers, new screw feeder and new coal grinding mill are subject to 35 IAC

212.321, which provides that: No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 IAC 212.321(c) [35 IAC 212.321(a)].

d. The Permittee shall not cause or allow the emissions of smoke or other particulate matter, with opacity greater than 30 percent, into the atmosphere from any emission unit, including the new screw feeder and new coal grinding mill, pursuant to 35 IAC 212.123(a).

e. The Permittee shall not cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source, pursuant to 35 IAC 212.301.

f. The affected dryers are subject to 35 IAC 214.301, which provides that the Permittee shall not cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2000 ppm.

g. The affected dryers are subject to 35 IAC 215.301, which provides that the Permittee shall not cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 215.302 and If no odor nuisance exists the limitation of this Condition shall apply only to photochemically reactive material.

1.1.4 Non-Applicability of Regulations of Concern

a. The new screw feeder and the new coal grinding mill are not subject to the NSPS 40 CFR 60.670, Standard of Performance for Nonmetallic Mineral Processing, because the new screw feeder and new coal grinding would be use to handle coal, which is not a nonmetallic mineral as defined in 40 CFR 60.671.

b. The affected dryers are not subject to the limitations of 35 IAC 216.121, because the affected dryers are process emission units not fuel combustion emission units as defined in 35 IAC 211.2470.

1.1.5 Control Requirements

a. i. The Permittee shall not start up modified. Dryer #1 until changes to Dryer #2 are completed.

ii. Until such time Dryer #1 shall be operated in accordance with the requirements of the current operating permit.

b. i. At all times, the Permittee shall to the extent practicable, maintain and operate the affected dryers, dust collectors, Low NO_x burners and wet scrubbers in a manner consistent with good air pollution control practice for minimizing emissions.

ii. This requirements and other requirements of this permit apply to the affected dryers upon initial startup following modification.

c. Total clay throughput in each affected dryer shall not exceed 31,536 tons/month and 315,360 tons/year.

1.1.6 Emission Limitations

a. i. The affected dryers shall be equipped, operated and maintained each with low-NO_x burners.

ii. Hourly emissions of NO_x from each affected dryer shall not exceed 0.83 lb/ton of fed clay(approximately 0.72 lb/million Btu).

The above requirements for emission of NO_x represent the application of the Best Available Control Technology (BACT) as required by Section 165 of the Clean Air Act.

b. i. The affected dryers shall be equipped operated and maintained with wet gas scrubber

ii. Hourly emissions from each affected dryer shall not exceed the following limits:

Pollutants	Lb/Hr
PM	2.73
CO	12.09
NO_x	30.24
VOM	1.91
SO_2	23.18

iii. Annual emissions from each affected dryer shall not exceed the following limits:

Pollutants	Ton/Yr
PM	11.96
CO	52.96
NO_x	132.45
VOM	8.36
SO_2	101.55

These limits are based on the maximum operating rate and continuous operation, i.e. 8,760 hr/yr, for the affected dryers.

iv. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).

1.1.7 Testing Requirements

a. Within 180 days of initial startup of the affected dryers, pursuant to this permit the emissions of PM, SO_2 and NO_x from the dryer shall be measured during conditions that are representative of maximum emissions, pursuant to 40 CFR 60.736. (See also Condition 2.0)

b. The following methods and procedures shall be used for testing of emissions, unless another method is approved by the Agency: Refer to 40 CFR 60, Appendix A for USEPA test methods.

Location of Sample Points	USEPA Method 1
Gas Flow Velocity	USEPA Method 2
Particulate Matter	USEPA Method 5
Opacity	USEPA Method 9
Nitrogen Oxide	USEPA Method 7E
Sulfur Dioxide	USEPA Method 6A or 6C

c. Prior to carrying out these tests, the Illinois EPA's Regional Office shall be notified a minimum of thirty days prior to expected date of these tests and further notified a minimum of five working days prior to the test of the exact date, time, and place of these tests to enable the Illinois EPA to observe tests.

d. Copies of the Final Report(s) for these tests shall be submitted to the Agency within 14 days after the test results are compiled and finalized. The Final Report shall include as a minimum:

i. A summary of results;

ii. General information;

iii. A description of the test method(s), including descriptions of sampling points, sampling train, analysis equipment, and test schedule;

iv. A detailed description of test conditions, including:

a. Process information, i.e. mode(s) of operation, process rate, e.g. fuel consumption and raw material consumption;

b. Control equipment information, i.e., equipment condition and operating parameters during testing; and

v. Data and calculations, including copies of all raw data sheets and records of laboratory analysis, sample calculations, and data on equipment.

1.1.8 Monitoring Requirements

a. i. The Permittee shall comply with all applicable monitoring requirements in the NSPS 40 CFR 60.734; for the affected dryers.

ii. Pursuant to these provisions, the Permittee shall monitor opacity from each affected dryer unless the Illinois EPA authorizes operational monitoring pursuant to 40 CFR 60.734(d).

b. The Permittee shall monitor the operating rate of each dryer, either directly in terms of fuel or clay input to the dryer or indirectly through other operating parameters.

c. The Permittee shall monitor the following operating parameters for each scrubber:

i. Pressure drop across the scrubber.

ii. The Permittee shall monitor the scrubbant flow rate, which shall record hourly average of scrubbant flow rate.

1.1.9 Recordkeeping Requirements

a. The Permittee shall follow all applicable recordkeeping requirements in the NSPS 40 CFR 60.735.

b. The Permittee shall keep the following records for the affected dryers:

i. Coal and fuel oil sulfur content in percent by weight.

ii. Amount of coal, fuel oil usage(tons/month and tons/year) and natural gas usage(scf/month and scf/year).

c. The Permittee shall keep the following information for control system.

i. Information monitored pursuant to Condition 1.1.8 including hourly average data.

ii. The pH of the scrubbant, determined at least once per shift.

iii. The pressure drop across the baghouse at leas once per day.

d. The Permittee shall keep Logs of inspection and maintenance of the affected dryers, dust collectors and wet scrubbers.

e. The Permittee shall keep record of the monthly and annual emissions of SO_2, NO_x and PM from the affected dryers based on fuel usage and operating recordswith other supporting documentation and calculation.

f. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.

1.1.10 Reporting Requirements

a. The Permittee shall promptly notify the Illinois EPA, Section of any noncompliance of the affected dryers with the permit requirements as follows. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

b. Two copies of the report and notifications required by this permit shall be sent to:

Illinois Environmental Protection Agency

Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276
Telephone: 217/782-5811 Facsimile: 217/524-4710

and one copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
2009 Mall Street
Collinsville, Illinois 62234
Telephone: 618/346-5120 Facsimile: 618/346-5155

1.1.11 Operational Flexibility/Anticipated Operating Scenarios

None

1.1.12 Compliance Procedures

a. Compliance with Condition 1.1.3(c) (d) and (e), is assured and achieved by the proper operation, maintenance, and work-practices inherent in operation of the affected dryers.

b. i. Compliance with the emission limits in Condition 1.1.6 shall be based on the recordkeeping requirements in Condition 1.1.9 and;

ii. For NO_x, CO, VOM and PM, the emission factors and rates developed from those measured during emission testing, if the affected dryers are properly operated. Otherwise, emissions shall be determined using the most appropriate emission factors selected based on good engineering judgment.

iii. For SO_2, the sulfur content of the fuel used in the affected dryers and appropriate emission factor selected based on good engineering judgment.

2.0 i. This permit authorizes phased construction of the affected dryers as follows:

Phase I: Dryer #2.

Phase II: Dryer #1.

ii. Pursuant to 40 CFR 52.21(r)(2), Phase I must commence construction within 18 months of the date, which this PSD Construction Permit becomes effective.

iii. Phase II must commence construction within 18 months of completion of Phase I. i.e., the completion date for Phase I is the startup date of Dryer #2 with the new low NOx burner and control systems.

iv. This 18-month period may be extended by the Illinois EPA upon request by the Permittee if additional justified time is needed to continue the construction of the affected dryers.

3.0 a. Under this permit, each modified dryer may be operated for a period of up to 180 days from initial startup to allow for equipment shakedown and emission testing as required. This period may be extended by the Illinois EPA upon request of the Permittee if additional time is needed to complete shakedown or perform emission testing.

b. Upon successful completion of emission testing demonstrating compliance with applicable short-term limitations, the Permittee may continue to operate the dryers under this construction permit until the next reopening of the CAAPP Permit.

Ricardo Ng

RNG

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ATTACHMENT A

Changes in Emissions from Dryers #1 And #2.

Pollutants	Historic Emissions (ton/yr)	Potential Emissions (ton/yr)	Increases (ton/yr)
PM/PM_{10}	13.58	23.92	10.34
CO	25.31	105.92	80.61
NO_X	86.92	264.90	177.98*
VOM	4.53	16.72	12.19
SO_2	192.12	203.10	10.98

* Changes in emissions from dryer #1 and #2 results in significant emission increase for NO_x.

RNG